

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent

appln. of : Keith C. Hong, et al.

Appln. No: 10/600,847

Filed: June 20, 2003

For: **ALGAE RESISTANT ROOFING
GRANULES WITH CONTROLLED
ALGAECIDE LEACHING RATES,
ALGAE RESISTANT SHINGLES, AND
PROCESS FOR PRODUCING SAME**

Group Art

Unit: 1762

Examiner: Elena Tsoy

Docket No: 008-02

Mail Stop Amendment
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER RULE 131 (37 C.F.R. § 1.131)


As an inventor of the subject matter claimed in the above-referenced patent application, I declare the following:

1. Figures 1 and 2 appended hereto are electron micrographs of algae-resistant granules produced before November 27, 2002 by the process of Example 5 of the disclosure of the above-referenced patent application.
2. Exhibit A hereto is a copy of page 56 of the laboratory notebook of Keith Hong, pages 58-59 and 70-75 of the laboratory notebook of Mr. Justin Scanlon, working under the direction of Keith Hong, and pages 7, 38 and 48 of the laboratory notebook of Mr. Adam Wolfgang, working under the direction of Keith Hong, and recorded before November 27, 2002 showing preparation of the algae-resistant roofing granules of Figures 1 and 2. Date information has been redacted.


3. Figure 3 appended hereto is an electron micrograph of algae-resistant granules produced before November 27, 2002 by the process of Example 4 of the disclosure of the above-referenced patent application.
4. Exhibit B hereto is a copy of nine pages from the laboratory notebook of Keith Hong showing preparation of the algae-resistant roofing granules of Figure 3. Date information has been redacted.
5. Figure 4 appended hereto is a photograph taken before November 27, 2002 of a test roof prior to the application of shingles thereto, showing the intended locations for installing various types of test and control shingles. The areas marked "NW T-1" and "NW T-2" are marked for the installation of asphalt shingles manufactured using algae-resistant granules made according to the process of present invention at applicants' assignee's Norwood manufacturing facility.
6. Figure 5 appended hereto is a photograph taken before November 27, 2002 of the test roof of Figure 4 subsequent to the installation of shingles thereon. Asphalt shingles manufactured using algae-resistant granules made according to the process of the present invention at applicants' assignee's Norwood manufacturing facility have been applied to the test roof at the locations indicated in Figure 4.
7. Exhibit C hereto is a copy of a manufacturing record evidencing the production of the algae-resistant granules used to manufacture the asphalt shingles installed in the area marked "NW T-1." (or T-1) Date information has been redacted.
8. Figure 6 appended hereto is a photograph taken before November 27, 2002 of an exterior exposure test station subsequent to the installation of shingles thereon. Asphalt shingles manufactured using algae-resistant granules made according to the process of the present invention at applicants' assignee's Norwood manufacturing facility have been applied to the exterior exposure station.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Inventor's signature:


Keith C. Hong

Date:


Jan. 13, 2006

Inventor's signature:


Hushu M. Kalkanoglu

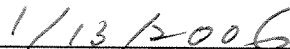
Date:


1/16/2006

Inventor's signature:


Ming L. Shiao

Date:


1/13/2006

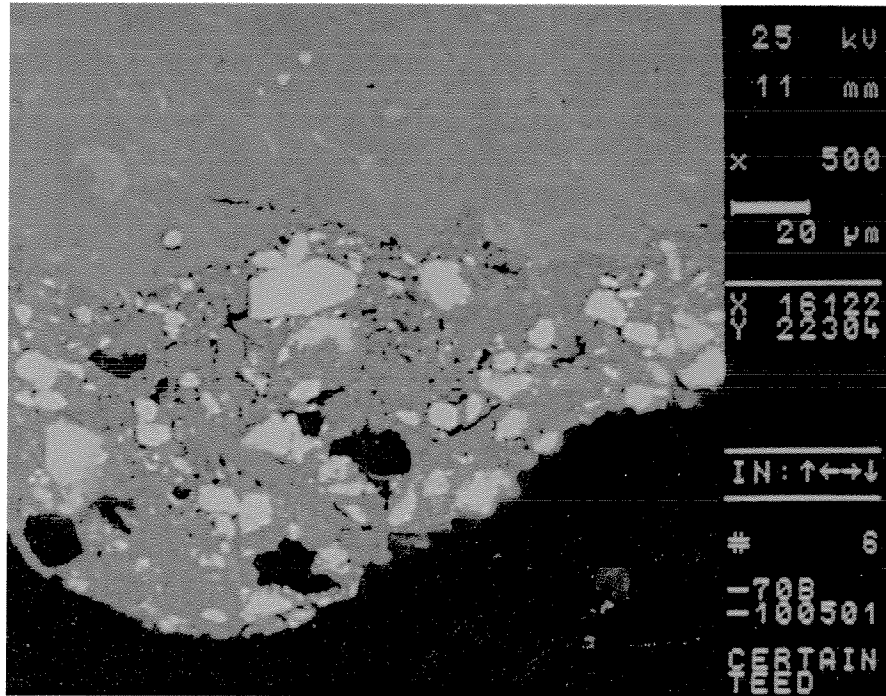


Figure 1

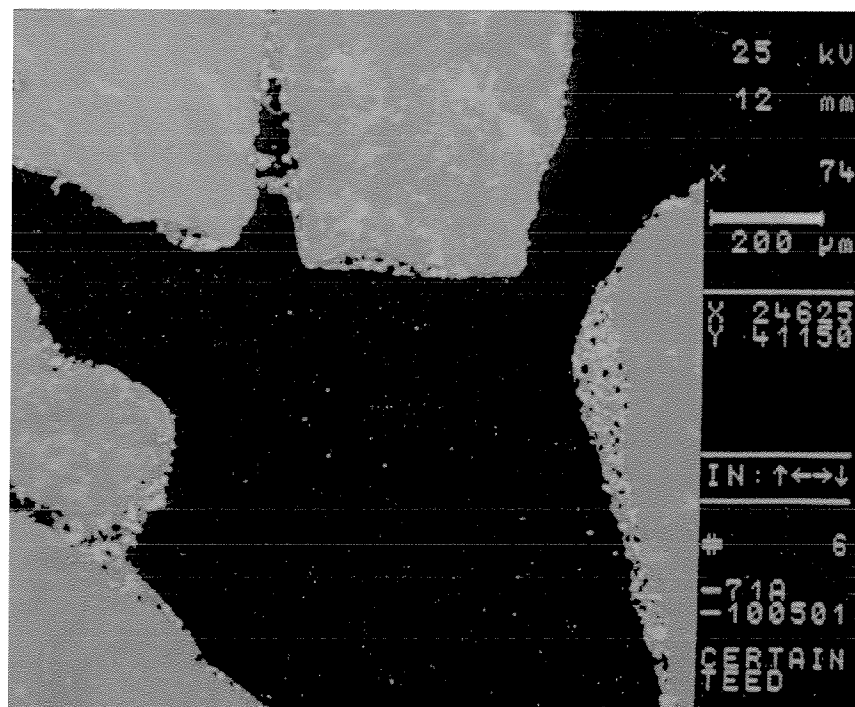


Figure 2

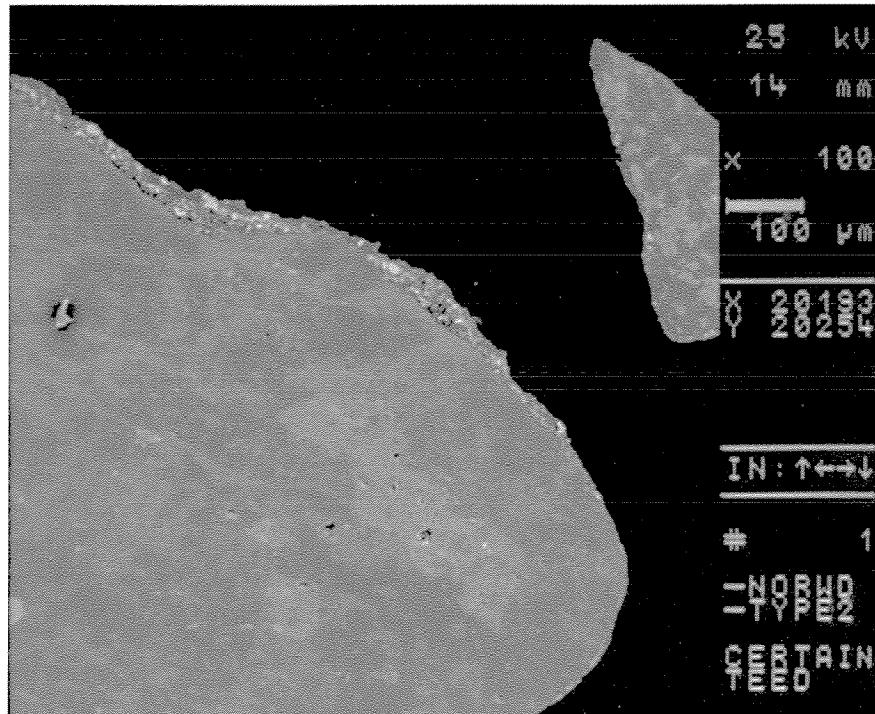


Figure 3



Figure 4



Figure 5

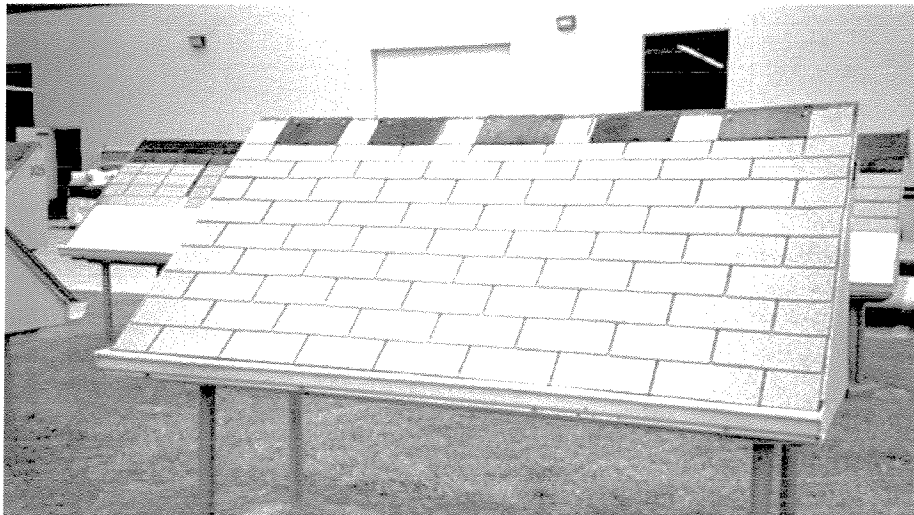


Figure 6

Exhibit A

LABORATORY NOTEBOOK

Notebook No.: KH-1

Assigned to: Keith Hong

Date: _____

Use Nalge Cat. No.

6301-1000
to reorder.

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Printed in U.S.A.



Algae-Resistant Granules

In order to improve + increase diffusion of Cu + Zn ions from the inner layers of the algae-resistant granules, one needs to provide open channels within the copper + zinc oxide layer. One idea is to add pore inducers

My dear Vittrified Veterans,

Who has an answer for our former Organic friend? See below.

My first reaction would be bubbled alumina, although it would result in closed porosity. If closed porosity is not a problem, perhaps glass spheres would offer a more controlled size distribution.

Mike

-----Original Message-----

From: Hong, Keith C.
Sent:
To: Mahoney, Michael
Subject: Pore inducers

Hi Mike,

Long time no see. How is everything? I understand you guys are busy with the World Meetings lately, hope it all goes well.

Have a question on pore inducers. I am interested in some sort of compounds that would introduce porosity into my coating in a controlled manner. The coating consists of sodium silicate, clay and pigments, and is generally fired at 900 °F. The thickness is 10-30 microns. What types of pore inducers would you recommend?

Thanks a lot

Keith Hong
Phone (610) 341-6204

Read and Understood By

Keith Hong

Signed

Date

Signed

Date

Algae-Resistant Granules

In order to improve + increase diffusion of Cu + Zn ions from the inner layers of the algae-resistant granules, one needs to provide open channels within the copper + zinc oxide layer. One idea is to add pore inducers into the layer. The pore inducers are usually organic materials which would burn off or evaporate during the firing of the granules at 925°F nominal temperature.

Will discuss this idea with our friends at the Abrasive Branch since they use walnut shell and other natural materials as pore inducers in vitrified grinding wheels.

Continued on Page _____

Read and Understood By

Keith Hing

Signed

Date

Signed

Date

LABORATORY NOTEBOOK

Notebook No.: ONE
Assigned to: Justin W Scanlon
Date: _____

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6301-1000

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Copper Granules Method: BM, 25, 356, 444
 1st Coating JWSL-58A

Raw Materials

#1 Wrentham Slate

Clay

 Cu_2O (Purple Corp HP11, 5355) ZnO (Zinox 350, 0229)

Sodium Silicate (

Water

WT (g)

1000.00

30.00

35.0285

1.7544

40.02

19.5

Fired at 900°F

2nd CoatingRaw Materials

#1 Wrentham Slate

Clay

 Cu_2O (Purple Corp HP11, 5355) ZnO (Zinox 350, 0229)

Sodium Silicate (

 Cr_2O_3 (

Water

WT (g)

800.00

24.02

28.0252

1.4007

1.2016

15.21

Fired at 900°F

3rd Coating - NW 51 BlackRaw Materials

Clay

#1 Wrentham Slate

 ~~ZnO (Zinox 350, 0229)~~

Sodium Silicate (

Carbon Black (

Water

WT (g)

7.52

70.00

750.00

116.88

2.1575

7.55

Fired at 750°F

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

Method 3M to S, 350, 444 Oct 15, 94

1st Coating JWS 1-58-94

Raw Materials#11 Wrentham Slate
ClayCu₂O (Purple Copper HP11, 5359,

ZnO (Zinc 350, 0229,

Sodium Silicate (1, Oxych 421

Water

WT (S)

1000.00

30.00 ~~35.0069~~

35.0062

1.7548

42.05

19.50

Fired at 750°F

2nd Coating

Raw Materials#11 Wrentham Slate
ClayCu₂O (Purple Copper HP11, 5359,

ZnO (Zinc 350, 0229,

Sodium Silicate (1, Oxych 421

Water

WT (S)

750.04

82.52

26.2520

1.5125

28.14

14.31

Fired at 750°F

3rd Coating NW 51 Black

Raw Materials

Clay

#11 Wrentham Slate

Sodium Silicate (1, Oxych 421

Carbon Black (1,

Water

WT (S)

7.5275

750.01

10.70

2.1572

7.62

Continued on Page

Read and Understood By

JWS

Signed

Date

Signed

Date

AR Granules just-to-A

*new formula

*trying new amount of
copper
- soda react, water, etc.

Round 1

Raw Materials

↓ 252	#1 Wrentham Slate	WT (g)
	Clay	1000.00
	Ca ₂ O (Purple Type HP3, Lot # 5454, Chemist)	22.50
↓	ZnO (Kedex - 920, Lot # 011085, ZCA)	23.0210
↓ 252	Sodium Silicate (Karschen 42)	1.7543
↓ 257	Water	30.01
		14.90

Fired at 650°F

Round 2 AR TONER AR Granules

Raw Materials

#1 Wrentham Slate	WT (g)
Air Floated Clay	850.00
Cr ₂ O ₃ Green Gr 1	17.00
12M Red	0.1484
Zinc Runic Tan B488X	0.2951
Copied Ceram Black	2.7604
Sodium Silicate (Karschen 42)	0.8357
Water	26.60
	6.02

AR Granules (w/ sprinkles) just-to-B

Raw Materials

#1 Wrentham Slate	WT (g)
Air Floated Clay	500.00
Ca ₂ O (Purple Type HP3, Lot # 5454, Chemist)	15.00
ZnO (Kedex - 930, Lot # 011085, ZCA)	17.6705
Sodium Silicate (Karschen 42)	0.8752
Water	20.02
Sprinkles (Coke Mesh, Non-petroleum based)	9.81
	6.04

Fired at 650°F

Continued on Page 70

Read and Understood By

Justin O'Scarla

Signed

Date

Signed

Date

AR Granules (w/ sprinkles) JWS 1-71-A

Raw Materials

#11 Wrentham Slate

Air Floated Clay

CaO (Purple type HP3, Lot # 5454, Chemt)

ZnO (Kadox-930, Lot # 011085,

Sodium Silicate (Oxychem 42,

Water

Sprinkles (Coke Mats, Nonpareils Decor.)

WT (g)

500.01

15.00

17.6783

0.8755

20.00

9.52

15.01

Fired at 650°F

AR Granules (w/ large sprinkles) JWS 1-71-B

Raw Materials

#11 Wrentham Slate

Air Floated Clay

CaO (Purple type HP3, Lot # 5454, Chemt)

ZnO (Kadox-930, Lot # 011085,

Sodium Silicate (Oxychem 42,

Water

Sprinkles (Coke Mats, Rainbow Decor.)

WT (g)

500.00

15.00

17.6771

0.8750

20.01

9.50

15.01

Fired at 650°F

AR Granules (w/ cane sugar) JWS 1-71-C

Raw Materials

#11 Wrentham Slate

Air Floated Clay

CaO (Purple type HP3, Lot # 5454, Chemt)

ZnO (Kadox-930, Lot # 011085,

Soda Silicate (Oxychem 42,

Water

Super Fine Cane Sugar (Domino Sugar)

WT (g)

500.00

15.00

17.6787

0.8750

20.00

9.61

15.01

Continued on Page

72

Read and Understood By

Justin W. Sealer

Signed

Date

Signed

Date

~~AR Granules (w/ Regal Black) June 1-72-A~~~~Raw Materials~~~~#11 Wrentham Slate~~~~Air floated clay~~~~Cu₂O (Purple type #P3, Lot #5454, Chemet)~~~~ZnO (Kadox-930, Lot #011085, 2 CA)~~~~Sodium Silicate~~~~Water~~~~* Regal Black 400 (Celat)~~~~WT(g)~~~~500.00~~~~15.01~~~~17.6759~~~~0.8756~~~~20.01~~~~9.62~~~~15.01~~~~Fired at 650°F~~~~too much Regal Black
could not use~~

AR Granules (w/ crushed walnuts) June 1-72-B

Raw Materials

#11 Wrentham Slate

Air floated clay

Cu₂O (Purple type #P3, Lot #5454, Chemet)

ZnO (Kadox-930, Lot #011085, 2 CA)

Sodium Silicate (Oxychem 42)

Water

* Crushed Walnut (#3 shell)

WT(g)

500.00

15.01

17.6750

0.8743

19.99

9.61

15.02

Fired at 650°F

AR Granules (w/ crushed walnuts #5) June 1-72-B

Raw Materials

#11 Wrentham Slate

Air floated clay (same as above)

Cu₂O (" " ")

ZnO (" " ")

Sodium Silicate (" " ")

Water

Crushed Walnut (#5 shell)

WT(g)

500.01

15.00

17.4789

0.8738

20.01

9.57

Fired at 650°F

15.00g

Continued on Page 73

Read and Understood By

Justin W. Seale

Signed

Date

Signed

Date

AR Granules (LH 040-2) for NW-S1 BLACK J25F74-A

Raw Materials

2H₂O - 2 AR Grains
 Air dried Clay ()
 Daphn. Lake Black ()
 Sodium Silicate (Oxychloride, 200-OC-20A)
 Water

125(5)
398.60
7.27
15.25
12.48
2.92

Find at 650°R

AR Grenules (w/ white shells, #4) JWS - 74-B

Raw Materials

4 11 Wrentham Slates
 fir Poles (12, 15, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100)
 Sodium Silicate (" " ")
 Cuz O (Purple type HP3, Lot #5454 chemist)
 Zn O (Kalsix-932, Lot #01085)
 Water
 Wheat shells (#4 shell)

WT(3)
500.00
15.01
19.99
7.1748
0.8743
9.21
15.00

Fired at 650°F

AR Granules

~~100-74-A~~
JLS 1-74-C

- * new formula
- one coating copper

Rear Materials

258	#11 Wrentham Slate
258	Clay
	Cu ₂ O (Purple Type #PS Lot # 5454 break)
	ZnO (Kodak 320 Lot # 011035)
258	Sodium Silicate (Oxychem 42)
258	Water

~~1000~~
 1000.00
 22.50
 23.0102
 1.7515
 30.02
 14.90

Fired at 650°F

Continued on Page 75

Read and Understood By

Signed Justin W. Sealer

Signed

Date _____

Signed

Date _____

AL Granules, new formula (Continued from ~~page 1-74~~)
 2nd coating - NW BLACK JWSI-74-C
 Raw Materials
 AL Granules (JWSI-74-C) 700.01
 Air-dried Clay 18.01
 Laporte Carbon Black () 258.72
 Sodium Silicate (Corydon 42,) 28.13
 Water 6.38
 Fired 650°F

Extended granules:

① LH040-2 \Rightarrow JWSI-74A

3308 granules, 11.55 g Cu₂O x 2, NW51 black

② JWSI-73A

3308 granules, 358 g Cu₂O + 239 g Cu₂O, NW51 black

Continued on Page

Read and Understood By

John U. Scarle

Signed

Date

Signed

Date

LABORATORY NOTEBOOK

Notebook No.: One

Assigned to: Adam Wolfgang

Date: _____

email: alw29@drexel.edu
cell phone: 570-265-3249

Use Nalge Cat. No.

6301-1000
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Copper-Coated Gravel a/w 1-7-A (same as just 1-62-A)

1st CoatingRaw Materials

	Wt (g)
#11 Wrentham Slate	1000.00
Clay	30.01
Cu ₂ O (Purple Type HP3, lot #5454, Clemet)	35.0270
ZnO (Kadox-920, lot #011085, ZCA)	1.7512
Sodium Silicate (Oxychem 42)	40.01
Water	19.61

Fired At 650°F

-gravel was clumpy after first coating

2nd CoatingRaw Materials

	Wt (g)
#11 Wrentham Slate	625.00
Clay	18.76
CO ₂ O (Purple Type HP3, lot #5454)	21.8921
ZnO (Kadox-920, lot #011085, ZCA)	1.0938
Sodium Silicate (Oxychem 42)	25.01
Water	12.26

3rd CoatingRaw Materials

	Wt (g)
#11 Wrentham slate	600.00
Clay	12.02
Laport Carbon Black	1.7271
Sodium Silicate (Oxychem 42)	18.75
Water	4.27

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

Copper Coated Granules

alw 1-38

Round 1

* 30g Sugar / 35g Cu₂O

Raw Materials

	wt (g)
#11 Wrentham Slate	1000.00
Air Floated Clay	30.00
Cu ₂ O (Purple Type HPS, Lot # 5454 Chemat)	35.0010
ZnO (Kador 920, Lot # 011085, ZCA)	1.7570
Sodium Silicate (Oxychem 42)	40.00
Water	15.00
Domino Sugar (Superfine Cane Sugar)	30.00

Fired at 650°F

Round 2

Raw Materials

	wt (g)
Copper Coated Granules (alw 1-38)	800.00
Air Floated Clay	16.00
Laporte Carbon Black	2.2991
Sodium Silicate (Oxychem 42)	24.00
Water	13.00
	564 10.00

Fired at 650°F

* after Round 1, dry Cu₂O coated granules were mixed with 10ml water and tumbled for 10 minutes to break up the clumpy granules before applying the pigment coating.

* amount of water used in pigment coating was increased to help maximize coverage.

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

Copper Coated Gravel

alw1-48

Round 1

#Kg Walnut Shell / 55g Cu₂O

Raw Materials

#11 Wrentham Slate

wt (g)

Air Floated Clay

1000.00

Cu₂O (Purpure Type HPS, Lot #5454, Chemet)

29.98

ZnO (Kadox 920 Lot #011055)

35.00

Sodium Silicate (Dychem 42)

1.7500

Water

40.00

Walnut Shell #6

25.00

15.00

Fired at 650°F

Round 2

Raw Materials

Copper Coated Gravel (alw1-48)

wt (g)

Clay

855.00

Laporte Carbon Black

17.50

Sodium Silicate

2.57

Water

27.20

11.00

Fired at 650°F

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

Exhibit B

Normal PR Grounds trial

16 ton/hr production rate

Variables only at Normal plant
\$ 244.96 per hour

Total cost is \$ 304 / hr, variables + fixed

⇒ Variables \$ 15.31 per ton

30.00 base rock cost

16.00 silicate, clay, etc
pigments
\$ 61.31 per ton

For 30 tons, ⇒

Cost ⇒ \$ 1,860 base cost

* Second cost : \$ 15.31

12.00 lower normal cost

(no) Variables / ~~Grand Total~~
(copy) cost / Grand Total

\$ 88.62 / ton

* Start at 9:30 pm, really start at 10 AM

4000 lb bath (4000 bare rock)

wt pigments 4.55% CuO	Base rock (1000)	4000	
	Clay	(20)	80 [58]
(4.60%) CuO		(50)	200
(0.16%) ZnO		(1.75)	7
pigments not included	Silicate	(37.5)	150 [60] total solids
	H ₂ O	(15)	60 [0] 4347 lbs

Walnut ^{shell} (15) 60 (Variation 2)

6.38% ; \Rightarrow 158 / kg bare rock

Do 8 batches in a row
for CuO/ZnO, then 8 batches in a
row for CuO/ZnO/walnut

Mixing time: 7.5 minutes

\Rightarrow 8 bath = 1 hr

CaO comes in 1100 lb/bag

Walnut shell in 2000 Superwhite

ZnO in 50 lb/bag

It's 4 minutes from time from the time
the mixture dries & dropped to the belt to
finished

The flame color is greenish rather
than yellowish (standard) due to the
emission color of CaO

willcap is ~ 5¢/lb (clay) ~ 100/ton
Silica (40% solids) ~ 8¢/lb

(one transition from previous run)
After 87 batches of coal/2nd only,
start the transition batch at ~ 11 AM.

This batch has 60 lbs walnut shell
plus 50 lbs carbon black pigment to make
- Ex ^{as} the transition.

The next 8 batches has only
coal/2nd/walnut shell, of course no
carbon black.

Color
granite 16 ton/hr \rightarrow 400 tons/day \Rightarrow 17 tons/hr

24 hr/day, 5.5 days/week

Produce 12 supersacks of GWO/200 only

" 15 " " GWO/200/ Walnut

Base note	Color	(GWO/200 only)	
		no nuts	w/ nuts
L	34.67	+ 6.26	- 4.88
a	1.44	+ 9.02	1.41
b	5.03	+ 5.08	- 0.61
AE		11.99	5.11

"Alkalinity" per Tom's method: 0.50 2.35

Color granules usage in shingles

25 tons per 6000 squares

NW 71 Granules - day 2

Coloring process:

- Start w/ 2 bags of ~~new~~ no nut ~~granules~~, using NW 71 formula. Measure color
- Next, go to the granules w/ nuts; run all the bags. Measure color. NW 71 formula starts we've one more chance of changing pigment to ~~the~~ match 3M L27000 color
- Finish off w/ the remaining no nuts granules.

* 2 bags is one batch of 4000 lbs
Each bag holds ~~1800~~ 1900 lbs - 2000 lbs

* start ~ 8 AM the coloring process

Load the bags to the conveyor belts,
treaty them as "std ~~any~~ base rate"

NW 71 standard

clay	80	(56)
M-Maple Tan 15	8.80	

120 Red	1.60
---------	------

Green Olive	1.70
-------------	------

807 Darts black	2.90
	<hr/>
	69.5

w/o nuts, 1st 2 Darts;

$$\Delta E = 3.6.$$

So the new foundation for w/o no nuts:

Tan	7.00
-----	------

Green Olive	1.50
-------------	------

Red	0.20
-----	------

Black	2.90 (no change)
-------	------------------

The one w/ nuts has $\Delta E = 3.90$,
but visually, it's pretty good.

⇒ with nuts has NW 71 foundation

Labeling:

Type I : No nuts

Type II : with nuts

Total AB granules

(1) Type I, no nuts

4 pack, ~ 4 tons

(2) Type 2, with nuts

3 pack, ~ 3 tons

no units, still hot

$$\Delta L = -1.56$$

$$\Delta a = 1.57$$

$$\Delta b = 0.45$$

$$\Delta E = 2.26$$

with units, w still hot

$$\Delta L = -3.78, -3.17$$

$$\Delta a = 0.96, 1.63$$

$$\Delta b = -0.24, 0.73$$

$$\downarrow$$
$$\Delta E = 3.90$$

$$\downarrow$$
$$\Delta E = 3.64$$

NW 71 take

$$L = 34.67$$

$$a = 1.44$$

$$b = 5.03$$

Exhibit C

cr 1	cur
+4	+4
+2	+1
+4	+3

S: 50 1/2
B: 16
J: 9 1/2

TRIAL RUN 196

M. Mares 4 1/4 3 1/2

7369.0 49.5 Wren
7369.5

7432.7 63.7 Dene
7369.0

Odeby 4 4

7523.3 90.6 Wren
7432.7

Doherty 8

7716.7 = 193.4 Wren
7523.3

(1.4) 6 Batches 1 3/4 6 1/4

(1.6) 14 Batches FB-SI = 22.5

6 Batches/

Da Silva 8

64 Batches FB-SI = 132.5

Da Silva 8

64 Batches FB-SI = 138.5

Finish Tanks

#1- 3

2- 3 1/2

3- 7

11 Base- 20 1/2

9 Base- 23

781.68

Rec'd 1 1/2" Wren Rock @ Terminal (30)

Sold fine (10)

Sold Base to F&G

Sold Waste to F&G

Sold FB-SI to F&G

702.75 T

311.12 T

186.3 T

3.0 T

293.5 T

142.5

S: 25 1/2
B: 16
J: 10

CR 1	CR 2
14	14
14	12
16	12

TOTAL RUN

OT 11

Reva 8

OT 11

C. Baulosa 3 3/4 4 1/4

24.1
24.7 = 24.4 Wren

30 Batches FB-53 = 52.8 T

(1.4)
TOTAL (30.8)
(2.3)

170.5 BASE

C. Baulosa / OT 11

DeSilva 8 8

Reva / OT 11

(2.1) 50 Batches FB-53 = 114.5

DeSilva 8 8

13 Batches FB-55 = 16.0

194.8 Wren

OT 11

DeSilva 8

DeSilva 8

64 Batches FB-55 = 133.0

244.9 = 138.5 Wren

41.3
44.9 = 46.4 BASE

Final Totals

1- 3

2- 3 1/2

3- 12

11 BASE - 5

9 BASE - 12

306.0

1 1/2" Wren Rock @ turn (20)

709.8 T

1 1/2" Wren Rock @ turn (20)

341.3 T

1 1/2" Wren Rock @ turn (20)

155.8 T

1 1/2" Wren Rock @ turn (20)

20.8 TOTAL

26.6 T

1 1/2" Wren Rock @ turn (20)

(10.1 hrs)

167.3 T

1 1/2" Wren Rock @ turn (20)

(9.7 hrs)

149.0 T

10 (12) 94

- The banana belt stopped again. 3²⁰ pm. Got to change the DRIVE side bearing - it's bad! Tony & Kevin changing it now.

- 0.545 into 33 = 17' (31 = 15')

41 - (Reminder for Joe K). I'll need Sat Jan 5 P.M.² Sunday in order to update (color code) the weekly P.M. (Sometimes Tuesday - I'll need then)

7P-7A

- Sent over 68.6 Tons of Base to #1 & #2 silos.

- Making FB-93 going into Silo #16-30' at 530 #15-15' #27-12'

7-3

ROOFING IS RUNNING APPROX 7200 BUNDLES OF LANDMARK 25 WEATHERWOOD AFTER THE CANNON STATE. THEY WILL RUN FT TIL THEY ARE OUT OF CT-50 BLACK; THEN THEY WILL RUN COBBLESTONE UNTIL 6AM. (CHANGE OVER TO 30'S)

FOR: WIND (FAL) WASH ~~G-4~~ (10 HANG) G-12 (FAL)
B-1 (FAL)

~~FAL~~ (FAL #3) BASE (FAL) WASH (FAL)

- THOMAS (3) FRANK OF LUMBER OFFICE IN THE LUMBER
BURNS 25 50'S "LUMBER MAINT SITES" CONTAINING

NORTHON Community, LEAVE in THE GARDEN, 10.

Ad - Cotte Johnson here a 1⁴⁰ for the locker-room bath
Will call you 4.45 for wed. A.M.

- I called shipping to get the Brodie guy in here for the job left that needs a rigger - Wednesday

- Salsate is ordered for Wed.

#4 belt won't run - might be the AC TECH

→ Upon S/U of DBN NO SPREADS
→ FAK 4pm - top of west ell shifted 2'

for Del Rio: (1) change C-12A reducer oil
DUEBET (2) replace the old water feed pipe
(3) start putting the other 2 m.
trunks together

age 25 now ; { 17-56' } } easy •

S/C FBW @ 4³⁰ AM —

al -

al

7P-7A

- I had DeHino put a canvas over the little hopper over incoming belt.
- DeHino couldn't use new shafts for Trunnions because they were wrong size so he used old shafts.
- Making FB-12 going into silo #6-40' at 5²⁰ #5-40'.

7-3

SCHEDULE IM

FBK: ~~6-10 (4:10 AM)~~ B-1 (10 HOURS) CT-50 (4:10 AM)
DBL was in machine - PREPARE FOR TITAN RUN

FBW: WHEN (FILL #3, #1, #3) BKS, WHEN

- SEPTIC TANKS ARE GOING TO BE PUMPED OUT TOMORROW. WE EXPOSED THE CANALS TODAY.

Reber

- When I sent Dave over (this afternoon) : when Barlowe went to lock out #9 & #11 base tanks - #9 base tanks valve rolled over opening - then closing. And when it opened some base water released. & gave ~~me~~ ~~the~~ the bells at least 4 minutes to clear after the lead man locks out the base valves

- Sat we 87.2 of base

reber

- Please have DeHino change the shafts in 2 of the trunnions he did last night. He put them in back-wards.